

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

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IN RE NATIONAL PRESCRIPTION	)	CIVIL ACTION No.
OPIATE LITIGATION	)	3:17-01362
Cabell County Commission	)	and
and City of Huntington, WV	)	CIVIL ACTION No.
_____	)	3:17-01665

EXPERT REPORT OF PETER J. BOBERG, PHD

August 27, 2020

Highly Confidential  
Subject to Protective Order

EXHIBIT 6

15. CRA is compensated at a rate of \$875/hour for my work in this matter. I have no financial interest in the outcome of the litigation.

**III. DR. MCCANN’S TREATMENT OF PHARMACEUTICAL SHIPMENT DATA FROM ARCOS AND DISTRIBUTORS**

16. I have reviewed Dr. McCann’s Expert Report and accompanying materials, including his treatment and analysis of pharmaceutical shipment data from ARCOS and Distributors, for example, in Sections V-VIII of his Report. I offer no opinions on the accuracy of Dr. McCann’s treatment of these data, and I make no corrections or adjustments to his treatment of the data.

**IV. DR. MCCANN’S APPLICATION OF ALGORITHMS IS MISGUIDED AND FLAWED LEADING TO INVALID AND UNRELIABLE RESULTS**

17. In Section VII of his Report, Dr. McCann analyzes the pharmaceutical shipment data from ARCOS and Distributors by implementing “a non-exhaustive set of algorithms” which “identify transactions meeting specified criteria.”<sup>2</sup> More specifically, Dr. McCann uses each algorithm to identify, or “flag,” shipments that exceed in terms of shipment volume (measured in dosage units) a threshold specified by the algorithm.<sup>3</sup>
18. For five of his six algorithms (Methods 1, 3, 4, 5, and 6),<sup>4</sup> Dr. McCann assumes that once a shipment is “flagged”, all shipments containing the same opioid drug shipped by the same Distributor to the same pharmacy are thereafter “flagged.” Therefore, in addition to “flagging” the shipment that exceeds the threshold for a given algorithm, Dr. McCann also “flags” any subsequent shipments involving the same Distributor, same pharmacy, and same

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<sup>2</sup> Dr. McCann applies his algorithms to ARCOS data from 2006 to 2014, supplemented where available with pharmaceutical shipment data from Distributors where the ARCOS data is missing and for the periods before 2006 and after 2014. Expert Report of Craig J. McCann, dated August 3, 2020, ¶¶ 18, 104.

<sup>3</sup> See, e.g., Expert Report of Craig J. McCann, dated August 3, 2020, ¶¶ 104-128. Dr. McCann conducts these analyses with respect to shipments of the following 12 opioids made by Distributors to chain and independent pharmacies: oxycodone, fentanyl, hydrocodone, morphine, hydromorphone, oxymorphone, tapentadol, codeine, meperidine, levorphanol, powdered opium and dihydrocodeine. See, for example, Expert Report of Craig J. McCann, dated August 3, 2020, Appendix 7, p. 3.

<sup>4</sup> Dr. McCann labels his six algorithms as follows: “Method 1: Maximum Monthly, Trailing Six-month Threshold,” “Method 2: Trailing Six-month Maximum Monthly, Fixed After First Triggered Threshold,” “Method 3: Twice Trailing Twelve-month Average Pharmacy Dosage Units,” “Method 4: Three Times Trailing Twelve-month Average Pharmacy Dosage Units,” “Method 5: Maximum 8,000 Dosage Units Monthly,” “Method 6: Maximum Daily Dosage Units.” For the sake of brevity, I refer to these algorithms as Method 1, Method 2, Method 3, Method 4, Method 5, and Method 6, respectively. Expert Report of Craig J. McCann, dated August 3, 2020, ¶¶ 105-128.